Host Communication Guide
for Mainframe and Midrange Users

Version 2.3

TABLE OF CONTENTS

May 2005   *Host Communications Guide*   *Table of Contents*
For Mainframe and Midrange Users   *i*
Version 2.3

Section 1: Overview

Preface

Welcome to the U.S. Department of Education's Federal Student Aid (FSA) Student Aid Internet Gateway (SAIG) that offers Title IV-eligible post-secondary institutions, third-party servicers, state agencies, lenders and guarantors, a secure, Internet-based method of exchanging Title IV data with the FSA Application Systems. The SAIG replaces what was formerly known as "TIV WAN" by moving Title IV transmissions from the General Electric (GEIS) value-added network to the Internet.

This guide is designed to meet the reference needs of programmers and data processing staff who transmit Title IV Data via a mainframe or midrange computer. Additionally, this guide serves as a working document that we will periodically update and revise so that you have access to the most current information possible.

The SAIG is designed around FSA's vision and target architecture to provide an Internet solution for data transmissions. FSA to the Internet offers an integrated solution for FSA's constituents by implementing a Commercial Off-the-Shelf (COTS) application that supports multiple hardware and operating system platforms.

Note: To all third party software providers:

1. Do not include transmission headers and trailers (O*N) on files to be transmitted via EDconnect.

2. Use the appropriate technical reference when creating output. The application system receiving the data will dictate use of low values and null values.

3. Provide a Carriage Return/Line Feed (CR/LF) in the final position of the data file to be transmitted.

The diagram in **Figure 1-1** represents the flow of data between SAIG destination points and Application Systems.

Figure 1-1: System Diagram
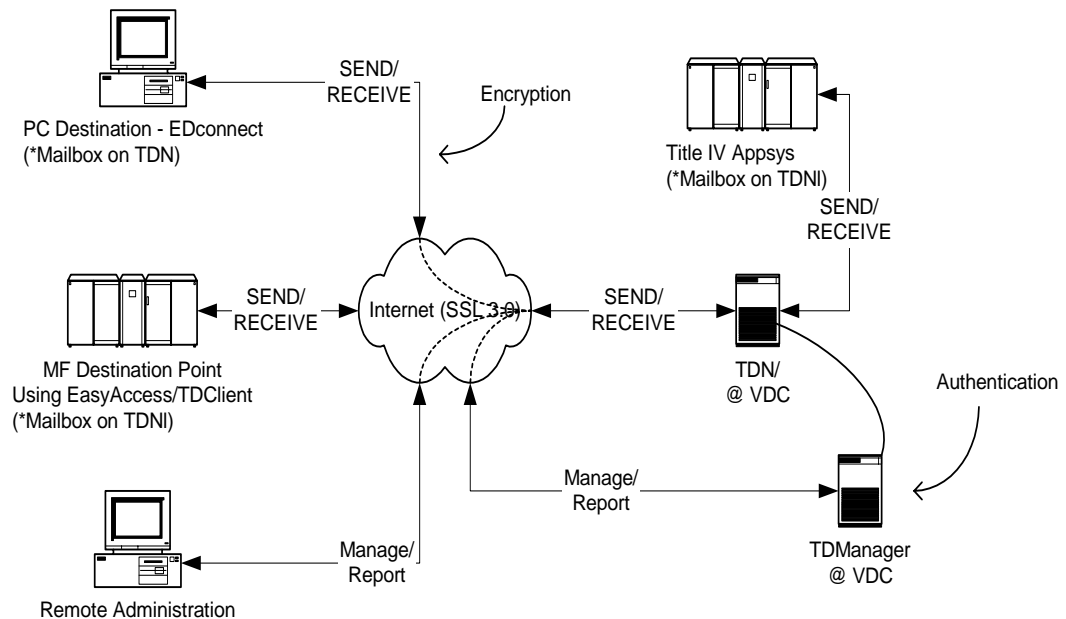
* SAIG destination points and SAIG Application Systems using EasyAccess/TDClient software component. EasyAccess/ TDClient incorporates the security features of TDManager and provides data security functions (authentication, encryption) to SEND/RECEIVE data to TDN. PC destination points continue to use EDconnect software (EDconnect will integrate EasyAccess/TDClient API).

The integrated solution consists of TDClient, TDManager, TDeNgine (TDN), and TDCommunity Manager components. The following sections provide more detail on each of these products.

TDClient

TDClient is the client software used to send and receive FTP (File Transfer Protocol) Title IV data transmissions securely over the Internet using SSL 3.0 and the Diffie-Hellman Dynamic Key Exchange algorithm. Port 26581 needs to be open in your firewall to allow inbound and outbound TCP/IP traffic. You can request the TDClient software by contacting CPS/SAIG Technical Support at 800/330-5947 or by email at **CPSSAIG@ed.gov.**

The TDClient software has the compression and decompression steps built into it. This means you no longer need the separate steps in your MVS JCL or Unix scripts for sends and receives.

TDClient is supported under the following mainframe/mid-range operating systems:

> - OS/390 MVS/ESA 2.6+ (with LE/370 1.9)
>
> - OS/400 4.2+ (Compiler Level 3.7)
>
> - AIX 4.2+
>
> - Digital UNIX 4.0 (DEC UNIX)
>
> - DEC Open VMS 7.1
>
> - HPUX 10.01+
>
> - Sun Solaris 2.6+ (SPARC chip only, Intel chip not supported)

TDManager & TDCommunity Manager

The Transaction Delivery Manager (TDManager) is the Click Commerce product that is used by System Administrators to manage SAIG. The TDCommunity Manager or TDCM is the Click Commerce product that is used to manage SAIG destination points. The product runs as a thin client and can be accessed via the Web. Users of the system are system administrators, customer service/technical support staff, and SAIG destination points. Destination points can use this system to manage their mailbox and view network traffic via the Internet.

The TDCM (formerly OSM) User's Guide, containing instructions on how to query your SAIG mailbox, is available on the FSAdownload Web site at fsadownload.ed.gov.

Section 2: Installation Guide

Configuring and Installing TDClient

Student Aid Internet Gateway (SAIG) destination points and application systems may use TDClient in any of the following environments:

- MVS OS/390, v2.6 + (must have POSIX functionality in LE, v1.9)

- AS/400, v4.2 + (Compiler Level 3.7)

- HP-UNIX, v10.2 +

- AIX, v4.2 +

- Sun Solaris, v2.6 + (SPARC chip only, Intel chip not supported)

- DEC Open VMS, v7.1 +

Helpful Hints

- TDClient requires a physical connection to the Internet.

- This product does not provide phone dialing or other functionality to establish the physical connection.

The TDClient software and the accompanying documentation are available via request through CPS/SAIG Technical Support at 800/330-5947 or request by email at CPSSAIG@ed.gov. You will need to have your TG user ID and institution code or applicable organization identifier available when you make your request.

Installation on MVS OS/390 Systems

To use TDClient, you must have MVS OS/390 2.6 or above, with the MVS feature of Language Environment Version 1, Release 9 with POSIX functionality. Higher versions of MVS and OS/390 must include the appropriate C++ language support feature. In order to use the file transmission feature, you must also have installed and configured TCP/IP for MVS Version 3, Release 1 or higher.

Materials required prior to installation:

- MVS TDClient from CPS/SAIG Technical Support

- TDClient.INI from **fsadownload.ed.gov**

To install TDClient:

Step 1)   Create a unique directory on your PC or LAN drive that will serve as the destination for the downloaded files.

Step 2)   Download the MVS OS/390 set of files containing the **EAMVSnnn.EXE** (nnn = current version of client) and **TDCLIENT.INI** files from the FTP site indicated by CPS/SAIG Technical Support.

Step 3)   Double-click the self-extracting **EAMVSnnn.EXE** file (nnn = current version of client). This step will extract the following files:

    a)   Xmit.bin

    b)   Readme.txt

    c)   Decomp.log

Step 4)   FTP the XMIT.BIN file in BINARY mode to an MVS dataset with the following attributes: RECFM=FB, LRECL=80, and BLKSIZE=3120. The xmit.bin file contains the TDClient load library, example JCL and configuration files. You can FTP the file in a variety of ways, such as from a DOS ftp prompt (see Figure 2-1), ftp client software, or 3270 emulator.

Installation on MVS OS/390 Systems (Continued)

Figure 2-1: Example FTP from a DOS FTP Prompt

```
C:\> ftp
ftp> open your.ip.address                         <= connect to MVS/OS390
220 User (none)): userid                          <= enter USERID
331 Enter password:xxxxxxx                        <= enter PASSWORD
230 USERID logged on.
ftp> bin                                          <= binary mode
200 Representation type is binary IMAGE.
ftp> quote site recfm=fb lrecl=80 blksize=3120    <= file attributes
200 SITE COMMAND WAS ACCEPTED
ftp> put c:\xmit.bin 'your.xmit.dataset'          <=ftp the file to the
                                                     mainframe
200 PORT subcommand request successful
125 Storing data set user.ealib.file
250 Transfer completed successfully
ftp> quit                                         <= disconnect
```

Step 5) Upload the compressed file from step 4 into a Partitioned Data Set (PDS). To
do this:

    a. Go to a **TSO READY** prompt.

    b. Type **RECEIVE INDA ('your.xmit.dataset').**' Replace
"your.xmit.dataset" with the dataset you created in Step 4. See Figure 2-2.

    c. When prompted to "enter restore parameters", type **DA
('your.install.dataset')**. See Figure 2-2. Replace "your.install.dataset"
with a dataset name appropriate for your installation. The install.dataset
must be a different name than the dataset name used in Step 5b.

The steps above will create an Installation Library containing the files required to complete the
installation of TDClient.

Figure 2-2: Example TSO RECEIVE

```
 READY
RECEIVE INDA ('your.xmit.dataset')
 Dataset SP01.DDNAME.INSTALL from SP01 on NODENAME
 Enter restore parameters or 'DELETE" or END' +
DA('your.install.dataset')
```

Installation on MVS OS/390 Systems (Continued)

Step 6) a. Edit the $INSTALL member of the **your.install.dataset** and make the changes described in Steps 1 - 6 of Figure 2-3 below.

b. Run the $INSTALL JCL.

Figure 2-3: Example MVS OS/390 $Install File before Editing

```
//jobname  JOB (acct),pgmr,MSGLEVEL=1,REGION=7M,CLASS=A,
//  MSGCLASS=X,NOTIFY=user
//*
//* MEMBER $INSTALL
//*
//* TDClient/MVS Installation JCL.
//*
//* Make the following changes:
//*
//*  1) Provide the appropriate fields on the JOBCARD, above.
//*  2) Change all occurrences of your.install.dataset to the name you created for
//*        this dataset.
//*  3) Change all occurrences of your.user.tdload to a valid destination dataset
//*        name.
//*  4) Change all occurrences of your.user.tdsamp to a valid destination dataset
//*        name.
//*  5) Change all occurrences of your.user.tdssamp to a valid destination dataset
//*        name.
//*  6) Change all occurrences of your.user.cpsamp to a valid destination dataset
//*        name.
//*
//*****************************************************************
//*TSO Receive for DISTLIB and SAMPLIB Datasets.
//*****************************************************************
//*
//RECEIVE  EXEC PGM=IKJEFT01,REGION=4096K
//SYSTSPRT DD   SYSOUT=*
//EALOAD   DD DSN=your.install.dataset(TDLOAD),DISP=SHR
//EASAMP   DD DSN=your.install.dataset(TDSAMP),DISP=SHR
//CPDBRM   DD DSN=your.install.dataset(TDSSAMP),DISP=SHR
//CPSAMP   DD DSN=your.install.dataset(CPSAMP),DISP=SHR
//SYSTSIN  DD  *
RECEIVE INFILE(TDLOAD)
      DATASET('your.user.eaload')
RECEIVE INFILE(TDSAMP)
      DATASET('your.user.easamp')
RECEIVE INFILE(TDSSAMP)
      DATASET('your.user.cpdbrm')
RECEIVE INFILE(CPSAMP)
      DATASET('your.user.cpsamp')
/*
```

Installation on MVS OS/390 Systems (Continued)

Step 7) Allocate a new file with attributes LRECL=80, RECFM=FB, BLKSIZE=23440 and name the file **`'your.dataset.prefix.TDCLIENT.EXFER.INI'`**. This file will remain blank until you send your first file using TDClient, at which time it will populate with parameters contained in the TRANSFER command line of your JCL (described in *Section 4, Communication Procedures*).

Step 8) Upload the **TDCLIENT.INI** file (from Step 1) as BINARY with the attributes RECFM=FB, LRECL=80, CRLF, and name the file **`'your.dataset.prefix.TDCLIENT.INI'`**.

Note: This file holds network configuration information and is described in *Section 4, Communication Procedures*. **Do not alter this file.**

Installation on HP, SUN, AIX & DEC UNIX Systems

TDClient provides file transfer capabilities with compression and encryption for UNIX platforms.

Materials required prior to installation:

- Request the appropriate TDClient for your system from CPS/SAIG Technical Support.

  - ✓ tdaccess.hp2.2.0205.sfx

  - ✓ tdaccess.Sun2.2.0205.SFX

  - ✓ tdaccess.AIX2.2.0205.SFX

  - ✓ tdclient.SFX for DEC-True64

- Download the TDClient.INI file from **fsadownload.ed.gov** (HP, SUN and AIX clients have the INI and the SECFILE bundled within the install file and do not need to be download.)
- DEC-True64 clients require a separate licensing file. Call CPS/SAIG Technical Support for the license. You will need the name of the Node/Host where DEC client is to be installed and your email address.

To create a license file for DEC-True64:

1. Attach to the adm directory: **cd/usr/adm**

2. Create a file called **EC_PRACTICE_LICENSES.DAT**

3. Edit the license file /use/adm/EC_PRACTICE_LICENSES.DAT, and add two lines: one with the nodename/hostname and product name, and a subsequent line with the license value.

4. On line 1, enter your node/host name, a space, then the Product-name supplied by CPS/SAIG.

5. On line 2, enter the word **LICENSE,** a space, and then enter the license value supplied by CPS/SAIG.

Without the license file you will receive the following error message:

'NO VALID LICENSE(S) FOUND FOR TDCLIENT'

To install TDClient:

1. Make a directory called **TDC** on the UNIX box you are using by typing **mkdir TDC** from the command prompt. You will choose the location to create the TDC directory. Note: To verify your folder or directory location, enter the command **pwd**.

2. Type **CD TDC** from the command prompt and press **Enter.**

3. FTP the file that you downloaded to the **TDC** folder.

4. Ensure that the TDClient install file has execute, read, and write permissions.   Note: you can change the permissions with many GUI FTP programs or by using the chmod command at the command prompt by typing **chmod [+x +r +w] tdaccess.hp2.2.0205.sfx**.

5. Run the TDClient self-extracting file from the command line to expand its components by typing the appropriate file name and then press **Enter**.

> *Note:* You will see the file decompressing at this time.

6. You will be prompted with a default directory location of TDAccess2.2 to install TDClient.

7. The next prompt will say: "Directory does not Exist. Create Directory?"

8. Type **"Y"** for yes and press the **enter** key.

9. Next you will be prompted to enter an E-mail address. You can enter any value here because the SAIG system does not use this Email address anywhere.

10. If you are installing the UNIX version of the TDClient you will be asked: "Install TDServer? <Y or N>".   Enter "**N**" and press the **Enter** key. *Do not install TDServer.*

11. The program will begin installing and display this message:

> *Installing TDAccess in directory /home/jtest/TDAccess2.2...*

> *Decompressing TDAccess 2.2 Installation file (this may take a minute or two ...)*

Note: you will see the files decompressing at this time.

12. After installing you will see the text:

> *Creating TDAccess subdirectories...*
> *Resetting file permissions for TDAccess files...*
> *cp -p exfer.ini /home/jsteapp/TDAccess2.2/exfer.ini*
> *cp -p tpaddrss.ini /home/jsteapp/TDAccess2.2/tpaddrss.ini*
> *Installation completed!*

After installation is completed you will see the following text:
IMPORTANT SYSTEM CONFIGURATION INFORMATION :

You must update your SHLIB_PATH environment variable to include the directory into which the TDAccess product was installed.

An example of how to do this is given in the file. profile_example created in this directory.

Since you may control the value of SHLIB_PATH from your .profile, or from some other point, this install program will not attempt to make this change for you.

However, the TDClient and TDServer programs will not be able to find the required shared libraries unless you update your environment.

NOTE: YOU MAY DISREGARD THE ABOVE MESSAGE, AS IT DOES NOT PERTAIN TO THE SAIG SYSTEM USE OF THE TDCLIENT.

Figure 2-4: Example of install text displayed on screen

```
$ pwd
/home/jtest
$ mkdir TDClient
$ cd TDClient
$ ll
total 12874
-rwxrw--w-  1 jtest   users     6590934 May 20 11:46 tdaccess.v2.2.020.hp11.SFX
$ ^C
$ -rwxrw--w-  1 jtest   users     6590934 May 20 11:46 tdaccess.v2.2.020.hp11.SFX
ksh: -rwxrw--w-:  not found
$ tdaccess.v2.2.020.hp11.SFX
TDCompress Build 0465 (master, triple DES) (c) Copyright 1990-2003
DECOMPRESS STARTED - Tue May 20 11:51:00 2003

Decomping tdaccess.v2.2.020.hp11.SFX
Decomped  install.dat
Decomped  tdsetup.ksh

Installing TDAccess 2.2, containing TDClient 2.2 and TDServer 2.2 ...

Please enter the directory in which TDAccess
is to be installed  [/home/jtest/TDAccess2.2]

Directory /home/jtest/TDAccess2.2 does not exist
```

Figure 2-4 (Continued)

Create? **<Y>**

 Please enter the EMail address you wish to appear in
 all Email, AS1 and AS2 messages you send to your trading partners
 and in your TDServer's Message Disposition Notifications (MDNs)
 (generally this is an 'administrative EMail address')
CPS/SAIG@Pearson.com

 Install TDServer ?   <Y or N>
N
Installing TDAccess in directory /home/jtest/TDAccess2.2...

Decompressing TDAccess 2.2 Installation file (this may take a minute or two ...)

TDCompress Build 0465 (master, triple DES) (c) Copyright 1990-2003
DECOMPRESS STARTED - Tue May 20 11:52:00 2003

Decomping ./install.dat
Decomped ./cmdparsepfx
Decomped ./compx
Decomped ./decompx
Decomped ./eaapi_test
Decomped ./eatest.c
Decomped ./eatest.cmd
Decomped ./exfer.ini
Decomped ./genkeys
Decomped ./iebase
Decomped ./import
Decomped ./inmsgp
Decomped ./libbtdao.sl
Decomped ./libbtmepit.sl
Decomped ./libbtsecure.sl
Decomped ./libbtsnmp.sl
Decomped ./libbtsocket.sl
Decomped ./libbttools.sl
Decomped ./libcpcert.sl
Decomped ./libcpsql.sl
Decomped ./libmdndb.sl
Decomped ./librelay.sl
Decomped ./librouter.sl
Decomped ./libslogmsg.sl
Decomped ./libsqlapi.sl
Decomped ./libssockapi.sl

Figure 2-4 (Continued)

```
Decomped  ./libtdclients.sl
Decomped  ./libtdnmib.sl
Decomped  ./license.txt
Decomped  ./listrtm
Decomped  ./outmsgp
Decomped  ./pfxhelp.txt
Decomped  ./readme.inv
Decomped  ./readme.txt
Decomped  ./release.txt
Decomped  ./run_in_background.ksh
Decomped  ./tdclient.cmd
Decomped  ./tdclient_example_read.me
Decomped  ./tdclientc
Decomped  ./tdserver
Decomped  ./tdserver.cfg
Decomped  ./tdserver_install_guide.doc
Decomped  ./tpaddrss.ini
*.ini not found
Creating TDAccess subdirectories...
Resetting file permissions for TDAccess files...
cp -p exfer.ini /home/jtest/TDAccess2.2/exfer.ini
cp -p tpaddrss.ini /home/jtest/TDAccess2.2/tpaddrss.ini
Installation completed!
```

TIP: you may need to modify the .profile record of the individual(s) who will be running TDClient. Add a variable called LD_LIBRARY_PATH= to define the path to the TDC directory. There are library files contained in the TDC directory that are needed by the TDClient executable.

Installation on DEC Open VMS System

Materials required prior to installation:

- TDClient from CPS/SAIG Technical Support.
- TDClient.INI from **fsadownload.ed.gov**
- DEC Open VMS clients require a separate licensing file. Call CPS/SAIG Technical Support for the license. You will need the name of the Node/Host where DEC Open VMS client is to be installed and your email address.

To create a license file:

1. In the **SYS$LIBRARY** directory create a file called **EC_PRACTICE_LICENSES.DAT**
2. Edit the license file SYS$LIBRARY:EC_PRACTICE_LICENSES.DAT, and add two lines: one with the nodename/hostname and product name, and a subsequent line with the license value.
3. On line 1, enter your node/host name, a space, then the Product-name supplied by CPS/SAIG.
4. On line 2, enter the word **LICENSE,** a space, and then enter the license value supplied by CPS/SAIG.

Without the license file you will receive the following error message:

'NO VALID LICENSE(S) FOUND FOR TDCLIENT 2000 CLIENT'

To install TDClient:

TDClient for VMS is provided in a self-extracting file that must be extracted from a VMS session. The file must be transferred to a VMS account using some sort of file transfer application such as FTP. Once the file is transferred, log into the VMS system and execute the file **ea2kvms71.exe**. *(Note: Make sure this file is in the directory in which the application is to be installed.)*

See Figure 2-5 on the next page:

Figure 2-5

```
$ run ea2kvms71.exe
This will create several files:
$ run ea2kvms71.exe
COMM-PRESS 2000 Ver 4.4.2 *o* (010) (master, triple DES) (c) Copyright 1990-2000
DECOMPRESS STARTED - Fri Aug 31 01:49:11 2001
Decomping apha1$dka0:[sys0.syscommon.][user.bjackson.ea2k]ea2kvms71.exe;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]CMDPARSEPFX.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]COMPRESS.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]DECOMP.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]EA2KCMD.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]GENKEYS.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]IEBASE.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]IMPORT.EXE;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]LICENSE.TXT;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]PFXHELP.TXT;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]README.TXT;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]RELEASE.TXT;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]README.INV;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]TDCLIENT.CMD;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]EXFER.INI;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]TPADDRSS.INI;1
Decomped APHA1$DKA0:[SYS0.SYSCOMMON.][USER.BJACKSON.EA2K]INSTALL.COM;1
Execute install.com at the command prompt:
$ @install
This will create the directory structure for TDClient for VMS.
(Install.com)
$! Simple command-procedure to create required sub-directories
$! for TDClient program for OpenVMS
$ create/dir [.incoming]
$ create/dir [.outgoing]
$ create/dir [.maint]
$ create/dir [.temp]
$ create/dir [.security]
$ create/dir [.runtime]
$ create/dir [.runtime.ign]
```

Installation on AS/400 System

To use TDClient, you must have OS/400 v4.2 or above. You must also have installed and configured the TCP component of AS/400 and establish a physical connection to the internet.

Materials required prior to installation:

- TDClient from CPS/SAIG Technical Support

- TDClient.INI from **fsadownload.ed.gov**

Installing TDClient AS/400 Software:

1. Create an empty save file on the AS/400.

   An example command to type would be - **CRTSAVF SAVEFILE.**

2. On a Windows 95/98/2000/NT system, decompress the distributed files by running the self-extracting executable file, EA400nnn.exe, (nnn = current version of client). This will generate the following files in the current directory:

   EA400.BIN (EA code for AS/400)

   README.TXT (brief notes on install)

   decomp.log (log on de-compressing the above 2 files)

3. Upload the distributed SAVE file (EA400.BIN) from the Windows PC to the new AS/400 SAVE file using a binary mode FTP transfer.

   See Figure 2-6 on the next page.

Figure 2-6: Example FTP Session to Transfer TDClient Software to AS/400

```
> ftp x.x.x.x (x.x.x.x = IP Add)      ←  connect to AS/400 at network address

220 User (as/400:(none)): userid      ←  type userID necessary

331 Enter password.                   ←  type password needed

230 USERID logged on.

ftp> bin                              ←  switch to binary transfer
mode

220 Representation type is binary IMAGE. ←  confirmation

ftp> put EA400.BIN SAVEFILE     ←  transfer installation save file

200 PORT subcommand request successful.

150 Sending file to member SAVEFILE in file SAVEFILE.

250 File transfer completed successfully.

ftp> quit                             ←  end FTP session
```

1. Use the RSTLIB command to unload the TDClient library. An example command is:
   **RSTLIB SAVLIB(EA148LIB) DEV(*SAVF) SAVF(SAVEFILE)
   RSTLIB(EA2KLIB)**

2. After the restore is complete, create the TDCLIENT object: An example command
   is: **CRTPF FILE(EA2KLIB/TDCLIENT) RCDLEN(200) FILETYPE(*SRC)**

3. FTP the TDClient.INI over to the OS400 in ASCII mode. An example command is:
   Put TDClient.INI ea2klib/tdclient rep

4. Make TDClient programs available to users. An individual user can do this by
   running "ADDLIBLE newlib" per session or the system administrator can make this
   available to all user by adding the newlib to the LIBRARY LIST.

Exchanging Data using AS/400 TDClient

1. Use the AS/400 command line or use the TDClient command-line interface application with the name EA2K400C or TDCLIENTC.

2. Use the PARM keyword on the CALL statement to specify this information:

   - Name of a stored transfer, User ID and password required to logon.

   - Compression and decompression program options, or Name of the command file that contains this information.

NOTE: When using the command file option from the command-line interface, the command file must be in a physical file format and should contain the appropriate transfer, compression, and decompression parameters.

The next table displays several command syntax examples used to implement an TDClient data transfers on an AS/400 computer.

AS/400 Data Transfers - Command Syntax Examples

Example	Command Examples
Command file name	**CALL EA2K400C** (or TDCLIENTC) **PARM('TRANSFER=CMDFILE=LIBRAR Y/FILE')**
Use a stored transfer called from command-line interface.	**CALL EA2K400C** (or TDCLIENTC) **PARM('TRANSFER=TRANSFER')**
Use a stored transfer with a blank in its name.	**CALL EA2K400C** (or TDCLIENTC) **PARM('TRANSFER="TEST TRANSFER"')** Use double quotes to surround the stored transfer name.
Creating a stored transfer for later use.	**CALL EA2K400C** (or TDCLIENTC) **PARM('TRANSFER=NAME="NEW TRANSFER"** **'PASSWD=password'** **'NETWORK=network'** **'ASCII' 'CRLF'** **'COMPRESS')**

NOTE: The new transfer name and parameters are appended to the EXFER file and can be called later by using only the stored transfer name. Specifying the transfer and compression options later will not be necessary.

AS/400 Operating System-specific TDClient Considerations

To simplify your command syntax when running utility programs or TDClient data transfers, you may want to use the CHGCURLIB (change current library) command to make the User specific RUNTIME library the current library.

Temporary Work Files

TDClient creates several temporary files as part of its normal application processing. These files are written to the AS/400 designated "current library". This is another reason for making the User specific RUNTIME library the current library prior to TDClient execution (with the CHGCURLIB command).

During transmission, TDClient creates temporary files named **SYSUT1** and **SYSUT2** in the current directory. These files hold directory listings and copies of compressed data files. System defaults are usually adequate for creating these temporary files; however, if you send or receive large files you may need to pre-create one or both of the temporary files with an adequate size to hold the data. If this is the case, then create these files as physical files with a record length of 256 bytes. You may need to experiment with the number and size of the record extents to allocate files of the desired sizes.

Naming and Allocating Work Files

Specify the file names used to send and receive data by using the LIBRARY/FILENAME(MEMBER) syntax. If the file is available via the **LIBLIST** command, then you can omit the LIBRARY portion of the command. If the first (or only) library member is needed, then you can omit the (MEMBER) portion of the command.

When receiving data, TDClient creates the output files if they do not exist. However, the files are created in the current library with default values for maximum record length and file size. If the defaults are not acceptable, then you should create the files with the appropriate with number and size of the record extents, prior to receiving the transmitted data.

Section 3: Security

Password Update Procedure

General Information

At initial setup, the default password to your Student Aid Internet Gateway (SAIG) mailbox User ID is **PASSWORD**. You will be required to update your password before performing any other activity. (See Figure 3-1.)

- Password must begin with an alpha character.
- Password must be a minimum length of eight characters.
- Password must contain at least one upper case and one lower case alpha character, plus one numeric character.

Note: Passwords submitted with older versions of MVS and Unix EAClient are forced to all upper case, unless you over-ride the default in your Transfer command line or within the TDCLIENT.INI file. Check the tdclient.ini or easyacc.ini file for the following parameter: "case=U" (this parameter should have a blank ' ' or 'L' instead of 'U' to allow for both upper and lower case characters in the password.)

- Password cannot be the word "PASSWORD" (ignore case).
- Password cannot be changed back to "PASSWORD". (Only CPS/SAIG Technical Support can reset a password to "PASSWORD".)
- Password cannot be any of the last four passwords used.
- Password cannot match the User Name or TG number (ignore case).
- Password will be locked out after three failures. (You must call CPS/SAIG Technical Support to have the password reset.)
- Passwords expire every 90 days, but you may change your password more frequently.
- You must update the password on all batch jobs used to communicate with the SAIG.

If you have any difficulty establishing your first password, contact CPS/SAIG Technical Support at 800/330-5947 and request to have your SAIG mailbox password reset.

Note: Network passwords can be changed by either of two methods: via batch job with the TDClient software, or with the TDCommunity Manager (TDCM). This document addresses only the batch process. The TDCM User Manual, containing instructions on the alternate method of updating your password is available on the FSAdownload Web site.

Batch Procedure

The example on the next page (Figure 3-1) shows how to change your mailbox password. You must manually change all other JCL or Scripts to reflect this new password, and you must also use this new password when signing onto TDCM. A password change may not be submitted by itself and must be accompanied by some other network activity such as, sending data, receiving data or a query list.

We recommend the following procedure for changing passwords every 90 days:

1. Create a separate job for password changes only. See figure 3-1 on the next page.

2. After changing your network password, run another job to send or receive a file using the new password in your command line. (i.e., FTPPASSWD=????????). Submission of the new password will update the stored password that is currently in the TDCLIENT.INI file. The stored password is encrypted for security and will not change unless you submit another password change. Note: Since TDClient will store any password supplied on the command line, we suggest that you maintain a separate TDCLIENT.INI file for testing purposes.

3. Remove the FTPPASSWD= parm from all existing programs and JCL. Removal of this parameter will cause TD client to use the password that is stored in the TDCLIENT.INI file.

If your SAIG password expires you will receive the following error in your Sysout file or logs:

- WARNING: Logon to server failed

- Login for UserID: TG71504 failed

- 332 Change password required

The only data elements required as input to the batch password update procedure are:

✔ **Note: No spaces between the old password, forward slash, and the new password.**

- Old password: 7 to 8 characters

- Forward slash separator: /

- New password: 8 characters

- Forward slash separator /

- Verify password: 8 characters

Figure 3-1: Example JCL Command Line for Password Change

```
//CMDSEND   DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx
FTPPASSWD=oldpass/newpass/newpass RESET
QUERY_LIST QUERY_FILE=DD:QUERY
//*
//QUERY   DD DSN=your.dataset.name.receiving.query.list
//            DISP=(NEW,CATLG),UNIT=SYSDA,
//            DCB=(LRECL=700,BLKSIZE=7000,RECFM=FB),
//            SPACE=(CYL,(30,13))
//*
```

Figure 3-2: Example UNIX Script for Password Change

Unix command lines are NOT case sensitive. Backslashes are being used at the end of each line for line continuation. Double quotes or no quotes may be used in command lines that use the backslashes for line continuation. Do not use single quotes. Change the executable name in the example to the appropriate Unix client that you have installed.

```
ea2khp10c "network=saigportal" ftpuserid=TGxxxxx        \
ftppasswd=OLDPASSWD/NEWPASSWD/NEWPASSWD reset query_list
```

Figure 3-3: Example AS400 Command Line for Password Change

```
Chgpasswd CMDFILE

crtpf file(ea148lib/passchg) rcdlen(80) filetype(*src)
*************** Beginning of data **********
NETWORK=SAIGPORTAL
FTPUSERID=TGxxxxx
FTPPASSWD=OLDPASSWORD/NEWPASSWORD/NEWPASSWORD RESET
QUERY_LIST QUERY_FILE=DD:QUERY
***************** End of data *************
```

Section 4: Communication Procedures

Introduction

This section describes basic procedures for sending and receiving data over the Student Aid Internet Gateway (SAIG).

This section:

- Contains a list of keywords

- Provides examples for sending and receiving data

- Describes the Query List function used to manage the contents of your mailbox(es)

- Documents the record layouts for network headers and trailers

Command Line Keywords

Command line keywords control the login process as well as what files are to be sent or received. The same commands (keywords) are used on all platforms. The appropriate transfer command lines are combined with the network command line to perform the desired actions as shown in Figure 4-1.

Figure 4-1: Example Network and Transfer Command Lines for Sending a Single File

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx FTPPASSWD=password  RESET
TRANSFER=(NAME=yourname SENDUSERID=TGxxxxx  SEND=DD:inputfilename
      OTHER_COMP_PARMS='SECFILE=DD:SECFILEX')
```

Figure 4-2: Network Command Line Keywords

Figure 4-2 lists keywords used in the NETWORK command line to sign on to TDPortal and perform any network activity: sending, receiving, query list or password changes.

Keyword	Definition
NETWORK	NETWORK=SAIGPORTAL is required. This parameter defines the secure network being used for the communications session. This will always be SAIGPORTAL to match the network defined in your TDCLIENT.INI file.
FTPUSERID	FTPUSERID=TGxxxxx is required (where "xxxxx" is your five digit TG number.) This is your SAIG mailbox user ID. This will not change from what you currently use.
FTPPASSWD	This is the password associated with the FTPUSERID. The TDCLIENT.INI file has the default set to CASE= (blank, to send case sensitive data to the server unchanged). You can override the default in your Transfer command line by using CASE=L (to send data to the server in lower case) or CASE= U (to send case sensitive data to the server in upper-case format).
	Once you have reset your password it is stored in the TDCLIENT.INI file in encrypted format and you will no longer need to use the FTPPASSWD parameter in your programs and JCL. See Section 3 for changing and maintaining passwords.

Figure 4-3: Transfer Command Line Keywords for Sending Data

Keyword	Definition
TRANSFER	This defines the transfer parameters of data being sent. A TRANSFER=NAME= can be saved to the TDCLIENT.EXFER.INI file by using SAVE at the end of the command line. This is helpful when data of the same message class is sent or received on a routine basis. Once a NAME= is saved, on subsequent job submissions you will only need to specify the saved NAME=, and not any of the other TRANSFER commands. TRANSFER contains the following keywords (parameters):
NAME=	This names the transfer being created. The definition will be saved in the TDCLIENT.EXFER.INI file, provided you use the SAVE command. If the name currently exists it will overwrite the current definition.
SENDUSERID=	SENDUSERID is a required parm in the Transfer command line. You must use a valid TG ID as a place holder in this field. Using your own TG ID is highly recommended. Note: Using a TG ID other than your own will cause your job to fail if the TG ID is deleted or inactivated. The O*N05 header record in your data file is the default for the TG ID where the data is being sent.
SEND=	This is the location that the data is being sent from (a UNIX filename or MVS DD name).
SENDCLASS=	SENDCLASS is optional, however, we highly recommend removing this parm from your Transfer command line. The O*N05 header record is the default for the message class. If you use this parm, it will override the default and not use the O*N05 header.
OTHER_COMP_ PARMS=	These are compression parameters used only during the compression step for sending data.
SECFILE=	This is a parameter used in OTHER_COMP_PARMS during sending. It contains the location of the secfile definition. This would be a UNIX filename or MVS DD name in JCL. This required parameter provides two functions: 1) The SECFILE defines the position of each parameter in the network headers and trailers. This information is used by TDPortal to separate files and place files in the correct mailboxes; and 2) It forces TDClient to use the SECFILE parameters to send and receive data properly. See Figure 4-4.
SAVE (Optional)	A TRANSFER NAME can be saved to the TDCLIENT.EXFER.INI file by using this keyword at the end of your command line command. This is helpful when data of the same message class is sent or received on a routine basis. Example: *TRANSFER=(NAME=yourname* *RECEIVE=DD:outputfilename* *RECEIVEUSERID=TGxxxxx RECEIVECLASS=messageclass) SAVE* Once a NAME= is saved, on subsequent job submissions you will only need to specify the saved NAME=, and not any of the other TRANSFER commands.

May 2005   *Host Communication Guide*   *Communication Procedures*
for Mainframe and Midrange Users   *4-4*
Version 2.3

Note: The TDCLIENT.INI file has the default set to CASE= (blank, to send case sensitive data to the server unchanged). You can override the default in your Transfer command line by using CASE=L (to overwrite the password in lower case format) or CASE= U (to convert and send network and transfer statement values to the server in upper-case format.) This affects the password field only.

Figure 4-4: Example SECFILE

```
SENDER(TGxxxxx);
HEADERLITERAL(O*N05) HEADERSTART(1) RECEIVERSTART(6)
RECEIVERLENGTH(14) CLASSSTART(25) CLASSLENGTH(8);
TRAILERLITERAL(O*N95) TRAILERSTART(1);
LITERAL(O*N01) LITERALSTART(1) DROP(Y);
LITERAL(O*N99) LITERALSTART(1) DROP(Y);
```

✔ *Note: Pay close attention to the placement of semicolons and spaces, or errors may result when you submit your JCL. The SECFILE is required when sending data.*

- SENDER(TGxxxxx) parameter is required by TDClient but is not being read, so you may insert any literal in the parenthesis. We recommend using your TG# in this parameter.

- HEADERSTART(1) indicates the O of the O*N05 to start in the first position.

- RECEIVERSTART(6) indicates that the receiver ID of a file being sent begins in the 6th position of the N05 header.

- RECEIVERLENGTH(14) indicates the length of the receiver ID field, including spaces.

- Using the CLASS options in the SECFILE forces TDClient to use the message class (CLS=) contained in the O*N05 header record.

  - CLASSSTART(25) indicates that the message class begins in the 25th position of the N05 header.

- CLASSLENGTH(8) indicates that the CLS= field is 8 positions long.

- All SECFILE parameters referring to Headers and Trailers that define the network headers and trailers are required.

  - The O*N05 Transmission Header and the O*N95 Transmission Trailer surround each set of application system headers and trailers in the data file being sent.

  - The O*N01 File Header and the O*N99 File Trailer are the first and last records, respectively, on every data file being sent.

Note: See Appendices A and B for more information on use of the TRANSFER command to control the data you send or receive.

- Appendix A, Example 2, is an example of how to compress a file separately from TDClient prior to sending the file.

- Appendix A, Example 3, is an example of how to send an already compressed file with compression turned off in TDClient.

Figure 4-5: Example MVS JCL to SEND Data

```
//STEP0020  EXEC PGM=EA2KMVSC,REGION=4M,TIME=1000,
//           PARM='CMDFILE=DD:CMDSEND'
//STEPLIB   DD DSN=your.dataset.prefix.EALOAD,DISP=SHR
//*
//EASYACC   DD DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//*
//EXFER     DD DSN=your.dataset.prefix.TDCLIENT.EXFER.INI,DISP=SHR
//*
//CMDSEND   DD *
NETWORK=SAIGPORTAL FTPPUSERID=TGxxxxx FTPPASSWD=xxxxxxxx RESET
TRANSFER=(NAME=yourname SENDUSERID=TGxxxxx SEND=DD:SENDFILE
OTHER_COMP_PARMS='SECFILE=DD:SECFILEX')
//*
//SENDFILE   DD DSN=your.send.file,DISP=SHR
//*
//SYSUT1    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//            LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK01    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//            LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK02    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//            LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK03    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//            LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK04    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//            LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS  DD DSN=your.EASTATUS,
//            DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(CYL,(5,5)),
//            LRECL=8192,BLKSIZE=0,RECFM=VB
//SECFILEX  DD *
SENDER(TGxxxxx);
HEADERLITERAL(O*N05) HEADERSTART(1) RECEIVERSTART(6)
RECEIVERLENGTH(14)
CLASSSTART(25) CLASSLENGTH(8);
TRAILERLITERAL(O*N95) TRAILERSTART(1);
LITERAL(O*N01) LITERALSTART(1) DROP(Y);
LITERAL(O*N99) LITERALSTART(1) DROP(Y);
//*
//OUTMSG    DD SYSOUT=*
//SYSPRINT  DD SYSOUT=*
//EAFTPLOG  DD SYSOUT=*
//EALOG     DD SYSOUT=*
//EXFERLOG  DD SYSOUT=*
//COMPLOG   DD SYSOUT=*
//CPFTPLOG  DD SYSOUT=*
```

Note: Insert your own dataset names, TG numbers, and time parameters as appropriate.

Figure 4-6: Example UNIX Script to SEND Data

```
ea2khp10c network=saigportal ftpuserid=TGxxxxx ftppasswd=xxxxxxxx reset \
"transfer=(name=yourname                                                 \
    senduserid=TGxxxxx                                                   \
    send=/your/send/file.txt                                             \
  other_comp_parms=secfile=./path/to/your/secfile.txt)"
```

Note: Replace the ea2khp10c with the appropriate client name. Backslashes are being used at the end of each line for line continuation. Double quotes or no quotes may be used in command lines that use the backslashes for line continuation. Do not use single quotes. You can have more that one "transfer=(DATA)" line to transmit multiple files.

See Figure 4-4 for example of SECFILE.

Figure 4-7: Example AS/400 Commands to SEND Data

```
crtpf file(ea148lib/ncssend) rcdlen(80) filetype(*src)

*************** Beginning
NETWORK=SAIGPORTAL
FTPUSERID=TGxxxxx
FTPPASSWD=PASSWORD RESET
TRANSFER=(NAME=yourname
SEND=EA148LIB/FILE
SENDCLASS=CLASS
OTHER_COMP_PARMS='SECFILE=EA148LIB/SECFILEX')
***************** End o
```

1) Create a physical file for the command parameters and a physical file for the secfile.

    ```
    CRTPF FILE(EA2KLIB/CMDFILE) RCDLEN(80) FILETYPE(*SRC)

    CRTPF FILE(EA2KLIB/SECFILE) RCDLEN(80) FILETYPE(*SRC)
    ```

2) Write the transfer parameters to the command file and the sender receiver characteristics for the secfile. See Figure 4-4 for example of SECFILE.

Figure 4-8: Example Open VMS Commands to SEND Data

```
 ea2kcmd "network=SAIGPORTAL" ftpuserid=TGxxxxx ftppasswd=PASSWORD
reset               "transfer=(name='yourname'
send=/your/send/file.txt senduserid=TGxxxxx)"
```

Figure 4-9: Example of Send File with Network Headers

```
O*N05TGxxxxx         ,CLS=messclas,XXX,BAT=xxxxxxxxxxxxxxxxxxxxxxxxx,
CPS HEADER  0450HTG51234  20000718150719           0001#C10025002000071
1002472030O'01002SAM                    008002472031
CPS TRAILER 0450H      20000718150719           000100010#C100250020
O*N95TGxxxxx         ,CLS=messclas,XXX,BAT=xxxxxxxxxxxxxxxxxxxxxxxxx,
```

See Figure 4-3 for parameters SENDUSERID and SENDCLASS in the Command Line Input section. See end of section 4, *Header and Trailer Record Layouts*, for specifics in creating O*N05 and O*N95 headers and trailers.

Following are lists of Input, Temporary and Output logs for send and receive JCL or scripts.

Input Logs

Input DD or Filename	Definition
STEPLIB	Dataset name (your.dataset.prefix.EALOAD) containing the TDClient program libraries you installed.
EASYACC	Dataset name containing the TDCLIENT.INI file, which contains network access information. – *Do NOT alter this file*.
EXFER	Dataset name containing the TDCLIENT.EXFER.INI file, which stores your saved TRANSFER commands.
CMDSEND*	**Command and Transfer statements to Send data.**
CMDRECV**	**Command and Transfer statement to Receive data.**
SENDFILE*	Location of the input file you wish to send from your SAIG mailbox.
RECVFILE**	Location of the pre-allocated files that will receive data pulled from your SAIG mailbox.

* Used only on Send Transmissions
** Used only on Receive Transmissions

Temporary Logs

Temporary DD or Filename	Definition
SYSUT1***	Holds directory listings and copies of compressed data files.
WORK01***	Receives compressed data and decompresses into the Receive file. If using COMPRESS=N then this file is not used.
WORK02***	Temporary storage for Query_List.
WORK03***	Not used
WORK04***	Works in conjunction with Eastatus
EASTATUS	Contains any errors during a send or receive session. Must be an allocated file; cannot be a temp file.
DCMPLOG**	Logs decompression step for each file received. Indicates if any files failed decompression.

Output Logs

Output DD or Filename	Definition
SECFILEX	This name comes from the "SECFILE=DD:" in the TRANSFER statement. It stores the SECFILE command lines that tell TDClient how to format the headers and trailers during compression/decompression.
OUTMSG	Confirms successful: a) login, compression, and send of file, or b) decompression and receive of files.
SYSPRINT	Logs the stored Transfer processing.
EAFTPLOG	Verifies success or failure of logging onto system and send/receive of files as identified by unique filename. Logs all internal and external FTP activities.
EALOG	General log of the session.
EXFERLOG	Verifies all internal FTP, compression, and decompression activities.
COMPLOG*	Verifies successful compression of data.
CPFTPLOG	Log of all commands and responses to and from the FTP server that is normally used for trouble shooting purposes

* Used only on Send Transmissions
** Used only on Receive Transmissions
*** Temporary work files required by the TDClient software. They may be defined as temporary files with the following parameters: LRECL= 8192, RECFM=VB, BLKSIZE=0.

Figure 4-10: Transfer Command Line Keywords for Receiving Data

Keyword	Definition
TRANSFER	This defines the transfer parameters of data being received. A TRANSFER=NAME= can be saved to the TDCLIENT.EXFER.INI file by using SAVE at the end of the command line. This is helpful when data of the same message class is sent or received on a routine basis. Once a NAME= is saved, on subsequent job submissions you will only need to specify the saved NAME=, and not any of the other TRANSFER commands. Within this keyword are the following keywords (parameters).

	Keyword	Definition
	NAME=	This names the transfer being created. The definition will be saved in the EXFER.INI file, provided you use the SAVE command. If the name currently exists it will overwrite the current definition.
	RECEIVE=	This is the location where the data will be received (a UNIX filename or a MVS DD name in JCL).
	RECEIVEUSERID= (Optional)	This field contains the mailbox ID you are receiving from, and is optional. If used without RECEIVECLASS, you will receive all data from the specified RECEIVEUSERID.
	RECEIVECLASS= (Optional)	This field contains the message class of the data you wish to receive, and is optional. If used without RECEIVEUSERID, you will receive all data from the specified RECEIVECLASS. If neither RECEIVEUSERID nor RECEIVECLASS are present, you will receive all data in the mailbox.
	OTHER_DECOMP _PARMS= (Optional)	These are decompression parameters used only during the decompression step for receiving data.
	SECFILE= (Optional)	This is a parameter used in OTHER_DECOMP_PARMS during sending. It contains the location of the secfile definition. This would be a UNIX filename or MVS DD name in JCL. This required parameter provides two functions: 1). The SECFILE builds the network headers and trailers used by TDPortal to separate files and place files in the correct mailboxes; and 2). It forces TDClient to use the SECFILE parameters to send and receive data properly. See Figure 4-4.
	SAVE (Optional)	A TRANSFER NAME can be saved to the TDCLIENT.EXFER.INI file by using this keyword at the end of your command line. This is helpful when data of the same message class is sent or received on a routine basis. Once a NAME= is saved, on subsequent job submissions you will only need to specify the saved NAME=, and not any of the other TRANSFER commands. Example: *TRANSFER=(NAME=yourname RECEIVE=DD:outputfilenameRECEIVEUSERID=TGxxxxx RECEIVECLASS=messageclass) SAVE*

Note: The TDCLIENT.INI file has the default set to CASE= (blank, to send the case sensitive data to the server unchanged.) You can override the default in your Transfer command line by using CASE=L (to overwrite the password in lower case format) or CASE= U (to convert and send network and transfer statement values to the server in upper-case format.) This affects the password field only.

May 2005   *Host Communication Guide*   *Communication Procedures*
for Mainframe and Midrange Users   *4-11*
Version 2.3

Figure 4-11: Example Network and Transfer Command Lines for Receiving a Specific Message Class from a Specific Sender (the RECEIVEUSERID)

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx FTPPASSWD=password  RESET
TRANSFER=(NAME=yourname  RECEIVE=DD:outputfilename
        RECEIVEUSERID=TGxxxxx RECEIVECLASS=messageclass)
```

You can modify the commands in many different ways, depending on what data you wish to receive. To receive all files of a given message class, specify that message class (EAPS02OP, for example) in the RECEIVECLASS command, but do not include the RECEIVEUSERID command.

- To receive all files from a given sender, specify the RECEIVEUSERID, but do not include the RECEIVECLASS command.

- To receive all files in the mailbox, do not include either the RECEIVEUSERID or RECEIVECLASS.

- To receive files of two separate message classes, issue two separate TRANSFER commands, each with separate RECEIVE=DDs or filenames.

Note: See Appendices A and B for more information on use of the TRANSFER command to control the data you send or receive.

- Appendix B, Example 7, gives an example of how to receive a batch and concatenate the optional O*N01 header and O*N99 trailer.

- Remember, when receiving files from your mailbox, files are received in the order of the query list option.

- Appendix B, Example 8, is an example of how to receive a file with decompression turned off during the TDClient Receive process.

- Appendix B, Example 9 is an example of how to decompress a file separately from TDClient if the file was received with decompression turned off.

Figure 4-12: Example JCL to Receive Data

```
//STEP0020  EXEC PGM=EA2KMVSC,REGION=4M,TIME=20,PARM='CMDFILE=DD:CMDRECV'
//*
//STEPLIB   DD DSN=your.dataset.prefix.EALOAD,DISP=SHR
//*
//EASYACC   DD DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//*
//EXFER     DD DSN=your.dataset.prefix.EASYACC.EXFER.INI,DISP=SHR
//*
//CMDRECV DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx FTPPASSWD=xxxxxxxx RESET
TRANSFER=(NAME=xxxxxxxx RECEIVE=DD:RECVFLE
   RECEIVEUSERID=TGxxxxx RECEIVECLASS=messageclass)
//*
//RECVFLE   DD DSN=your.dataset.receive.file,
//             DISP=(MOD,CATLG),UNIT=SYSDA,
//             DCB=(LRECL=nnnn,BLKSIZE=nnnnn,RECFM=FB),
//             SPACE=(CYL,(nn,nn))
//*
//SYSUT1    DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK01    DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK02    DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK03    DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK04    DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS  DD DSN=your.dataset.prefix.EASTATUS,
//             DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//*
//DCMPLOG   DD SYSOUT=*
//*
//OUTMSG    DD SYSOUT=*
//*
//SYSPRINT  DD SYSOUT=*
//*
//EAFTPLOG  DD SYSOUT=*
//*
//EALOG     DD SYSOUT=*
//*
//EXFERLOG  DD SYSOUT=*
//*
//CPFTPLOG  DD SYSOUT=*
//*
```

* *Note:* Insert your own dataset names and TG numbers. When defining the receive file dataset, make sure you have sufficient space allocated and that the record length matches the file you are receiving.

Figure 4-13: Example UNIX Script to Receive Data

```
ea2khp10c network=saigportal ftpuserid=TGxxxxx ftppasswd=xxxxxxxx reset \
"transfer=(name=yourname                                                 \
   receive=./path/to/the/file/to/receive.txt                             \
   receiveuserid=TGxxxxx                                                  \
   receiveclass=xxxxxxxx)"
```

Note: Backslashes are being used at the end of each line for line continuation. Double quotes or no quotes may be used in command lines that use the backslashes for line continuation. Do not use single quotes. You can have more than one "transfer=(DATA)" line to transmit multiple files.

Figure 4-14: Example AS/400 Commands to Receive Data

```
crtpf file(ea148lib/ncsrecv) rcdlen(80) filetype(*src)

*************** Beginning
NETWORK=NCSPORTAL
FTPUSERID=TGxxxxx
FTPPASSWD=PASSWORD RESET
TRANSFER=(NAME=yourname
RECEIVE=EA148LIB/RECEIVE
RECEIVECLASS=messageclass)
***************** End o
```

Note: When receiving a file, the receive file must already exist.

    crtpf file(ea148lib/receive) rcdlen(80) filetype(*src)

Figure 4-15: Example Open VMS Commands to Receive Data

```
Ea2kcmd "network=SAIGPORTAL ftpuserid=TGxxxxx ftppasswd=PASSWORD reset
"transfer=(name='yourname' receive=./path/to/the/file/to/receive.txt)"
```

Query List & Audit Log

The QUERY_LIST command is used outside of the Transfer statement and supersedes any commands used in the Transfer statement. You may use related keywords, QUERY_FILE= and QUERY_STATUS= to control aspects of this query.

QUERY_LIST	QUERY_FILE=	QUERY_STATUS=	RECEIVE_AUDIT_LOGS
Instructs the client to create and execute a transfer to receive a list of available files from your SAIG mailbox (TGxxxxx).	Specifies the qualified file name of the file to receive the list. If not present, the file list is written to the default file, *list.fil*, in the temp directory.	Specifies that the QUERY_LIST should return a list of files with the specified status only. Allowed status values are: • AVAILABLE – files which have not been received. • RECEIVED – files that have been received. • DELETED – files that have been deleted. • REJECTED – files whose status has been manually changed to "rejected", deleted on the TDCM.	Instructs the client to create and execute a transfer to receive a list of available files and a list of files that were sent from your SAIG mailbox (TGxxxxx). Status of files in this list are the same as QUERY_LIST and shows one additional status called ICFAIL. AUDIT STATUS= may be used with the values: • ICFAIL - files that have been rejected by the server. • AVAILABLE - files which have not been received. • REJECTED – files whose status has been manually changed on the TDCM to "rejected". The parm AUDIT TYPE= can be used in conjunction with AUDIT_STATUS, with values of: • SENT – files with a sent status on the TDCM • BOTH – files with a sent or received status

Examples: eaclient query_list query_status=available query_file=c:/temp/list.fil
Or eaclient receive_audit_logs

Query List and Audit Log (Continued)

Example of query list record:

2K.01.43\TG50000\TG40000\SARA03OP\U\4.42o.01\O*N05TG54000
,CLS=SARA03OP,BAT=#E30000020020315000000,NCT=00000\DD:SENDFILE\2.03
0\ASCCRLFILOTH\29501\TG40000\29501176151633026581\20010625151607\1\1523\\A**RECEIVE
D**\20010627153549\0\\\\\\50\50\

Note: This is one record of data in a sequential file and each field is delimited with a backslash.

See Figure 4-16 on the next page for specific field names and descriptions.

Query List and Audit Log (Continued)

The following is *an explanation of each field* of the LIST.FIL file created by TDClient when performing a QUERY_LIST (mailbox list) on the SAIGPORTAL. Each field is separated by a backslash "\".

Note: **Refer to Appendix B for transmitting by Unique file name.**

Figure 4-16: Description of Fields for a Query or Audit List

#	Field Name	Description
0	VERSION	EA version; e.g. 2K.01.39 *(Send only)*
1	SENDER	TG number of the Sender (active user)
2	RECVR	TG number of the Receiver (destination)
3	CLASS	Message Class
4	FORMAT	U = Unformatted
5	SYSTYPE	W95 (indicates all Windows systems), Open VMS, AIX, SUN, OS400, compression version of MVS, HPUX. *(Send Only)*.
6	O*N05 HEADER	Transmission header, O*N05, information
7	ORIGFILENAME	Temporary Send file name from EDIPDS file for MVS only and the original file name for Unix. *(Send Only)* Or Unique File Number *(Receive Only)*
8		
9		
10	SESSIONID	EAFTP generated session ID
11	USERID	Userid of user logged in for session
12	UNIQUEFILENAME	EAFTP generated unique filename
13	PUTDATETIME	EAFTP generated (ctime)
14	PUTDURATION	EAFTP generated ?
15	FILESIZE	EAFTP determined
16		
17	CHARFORMAT	A = ASCII, I = BINARY
18	STATUS	Status of file [RECEIVED, AVAILABLE, DELETED, ICFAIL]
19	GETDATETIME	EAFTP generated (ctime)
20	GETDURATION	EAFTP generated
21		Not used
22		Not used
23		Not used
24		Not used
25		Not used
26		Not used
27		Not used

Figure 4-17: Example Query List JCL

```
//STEP0020   EXEC PGM=EA2KMVSC,REGION=4M,TIME=100,
//           PARM='CMDFILE=DD:CMDRECV'
//STEPLIB    DD DSN=your.dataset.prefix.EALOAD,DISP=SHR
//EASYACC    DD DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//EXFER      DD DSN=your.dataset.prefix.EXFER.INI,DISP=SHR
//CMDRECV    DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx FTPPASSWD=password RESET
QUERY_LIST QUERY_STATUS=AVAILABLE QUERY_FILE=DD:QUERY
//*
//QUERY      DD DSN=your.dataset.name.QUERY.LIST,
//              DISP=(NEW,CATLG),UNIT=SYSDA,
//              DCB=(LRECL=700,BLKSIZE=7000,RECFM=FB),
//              SPACE=(CYL,(30,13)),RETPD=6
//SYSUT1     DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=V
//WORK01     DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK02     DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK03     DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK04     DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS   DD DSN=your.dataset.prefix.EASTATUS,
//              DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB,RETPD=6
//OUTMSG     DD SYSOUT=
//SYSPRINT   DD SYSOUT=*
//EAFTPLOG   DD SYSOUT=*
//EALOG      DD SYSOUT=*
//EXFERLOG   DD SYSOUT=*
```

Figure 4-18: Example RECEIVE_AUDIT_LOGS

```
//STEP0020  EXEC PGM=EA2KMVSC,REGION=4M,TIME=100,
//          PARM='CMDFILE=DD:CMDRECV'
//STEPLIB   DD DSN=your.dataset.prefix.EALOAD,DISP=SHR
//EASYACC   DD DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//EXFER     DD DSN=your.dataset.prefix.EXFER.INI,DISP=SHR
//CMDRECV   DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
RECEIVE_AUDIT_LOGS
//*
//AUDITLOG     DD DSN=your.dataset.name,
//             DISP=(NEW,CATLG),UNIT=SYSDA,
//             DCB=(LRECL=700,BLKSIZE=7000,RECFM=FB),
//             SPACE=(CYL,(30,13)),RETPD=6
//SYSUT1    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=V
//WORK01    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK02    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK03    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK04    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS  DD DSN=your.dataset.prefix.EASTATUS,
//             DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB,RETPD=6
//OUTMSG    DD SYSOUT=
//SYSPRINT  DD SYSOUT=*
//EAFTPLOG  DD SYSOUT=*
//EALOG     DD SYSOUT=*
//EXFERLOG  DD SYSOUT=*
```

Note: Instead of issuing a file name for RECEIVE_AUDIT_LOGS, you will create a DD name called AUDITLOG. The TDClient client is programmed to look for a dataset name called AUDITLOG.

File and Transmission Header & Trailer Record Layouts

The use of ___O*N05 and O*N95 header and trailer records is required.___ ___*O*N01 and O*N99 header and trailer records that were previously required in GEIS are optional*___. The File Header record (O*N01) identifies the beginning of the transmission. The File Trailer record (O*N99) identifies the end of the transmission. Transmission Header (O*N05) and Transmission Trailer (O*N95) records wrap the input data for each destination mailbox and message class. Thus, each transmission will contain a minimum of one header and one trailer record for send files. Please refer to Appendix B, Example 7, to add the optional O*N01 and O*N99 to the receive files.

The first record in the file is the Transmission Header ('O*N05') record. Your data follows the Transmission Header and after your data the Transmission Trailer ('O*N95') record follows. Transmission Header and Transmission Trailer records identify the input data for each destination mailbox and message class. Figure 4-19 shows two batches of data being sent to TGxxxxx for a message class of MSGCLASS.

Figure 4-19: Data File Transmission Headers & Trailers

Note: These are examples only and may require customization at your site.

```
O*N05TGxxxxx          ,CLS=MSGCLASS,XXX,BAT=xxxxxxxxxxxxxxxxxxxxxxxxxx,
your input data for first batch is inserted here
your input data for first batch is inserted here
your input data for first batch is inserted here
O*N95TGxxxxx          ,CLS=MSGCLASS,XXX,BAT=xxxxxxxxxxxxxxxxxxxxxxxxxx,
O*N05TGxxxxx          ,CLS=MSGCLASS,XXX,BAT=,
your input data for second batch is inserted here
your input data for second batch is inserted here
your input data for second batch is inserted here
your input data for second batch is inserted here
O*N95TGxxxxx          ,CLS=MSGCLASS,XXX,BAT=,
```

File and Transmission Header & Trailer Record Layouts (Continued)

Use of the O*N01 and O*N99 records are not recommended:

- *Record Identifier:*   Use O*N01 for File Header; use O*N99 for File Trailer. *(OPTIONAL)*
- *File Type:*   Specifies the code for the data type; 73 should always be used for compressed data.

Figure 4-20: File Header (O*N01) & Trailer Record (O*N99) Layouts (Optional)

Column	Length	Entry
1-5	5	*Record Identifier is optional and we recommend that you do not use.* Use O*N01 for File Header and O*N99 for File Trailer.
6-53	48	Blank
54-55	2	*File Type* (Always 73)
56-EOR	Variable	EOR=The end of record based on the message class being transmitted. Must be a minimum record length of 70 characters.

Note: **All header and trailer records are required to be a minimum record length of 70 characters.**

May 2005   *Host Communication Guide*   *Communication Procedures*
for Mainframe and Midrange Users   *4-21*
Version 2.3

File and Transmission Header & Trailer Record Layouts (Continued)

Transmission Header (O*N05) & Trailer Record (O*N95) Layouts (Required)

The Transmission Header record identifies the beginning of a group of input data records destined for a SAIG mailbox. The Transmission Trailer record identifies the end of this group of records. See Figure 4-21 for the required record layout of the Transmission Headers and Trailers.

The Transmission Header and Transmission Trailer records require these substitutions:

- *Record Identifier:* Use O*N05 for Transmission Header; use O*N95 for Transmission Trailer.

- *Destination Mailbox ID:* The Mailbox ID of who is to receive the data when you are sending; or the Mailbox ID of the sender when you are receiving. See application-specific guides and references for the correct destination mailbox for each message class.

- *CLS=Message Class:* The Message Class of the data you are sending. An eight-character label assigned to a particular type of data by the application system.
- *BAT=,:* The Batch ID or Document ID for the batch you are sending. The parameter "BAT=" and the ending comma is required. (i.e., "BAT=," or if you choose to populate this field with the ID then use up to 50 characters; "BAT=#D300018620030816120145," or "BAT=2003-10-21T16:40:19.3092722120,")

File and Transmission Header & Trailer Record Layouts (Continued)

Figure 4-21: Transmission Header & Trailer Record Layouts

Column	Length	Entry
1-5	5	Record Identifier *(Required)* Use O*N05 for Transmission Header and O*N95 for Transmission Trailer.
6-12	7	Destination Mailbox ID *(Required)* This field must have the same value on both the header and trailer record.
13-19	7	SPACES *(Required)*
20	1	',' (Comma) *(Required)*
21-24	4	CLS = *(Required)*
25-32	8	Message Class *(Required)* This field must have the same value on both the header and trailer record.
33	1	',' (Comma) *(Required)*
34-37	4	XXX, (Required)
38-41	4	BAT= *(Required)*
42-91 Variable	1-50 Variable	Up to a fifty character batch number. If using all 50 characters then adjust the remainder of the record layout accordingly. If no batch number then comma must follow the equal sign. Note: A comma must follow this number. (See next field).
42-92 Variable (Based on length of Batch Number.)	1	',' (Comma) *(Required)* Note: Must come directly after the Batch Number. If no batch number then comma must follow the equal sign.
93-EOR Variable, starts after comma.	Variable	The minimum record length required is 70. This can be spaces or any data applicable to your institution (such as NCT=).

The Transmission Header and Trailer records described above must be used with all data. Except for the Record Identifier in positions 1-5, both the **O*N05 and O*N95 records must match exactly from position 6 through the end of the batch number comma that starts in position 43+.**

Note: All header and trailer records are required to be a minimum record length of 70 characters.

May 2005   *Host Communication Guide*   *Communication Procedures*
for Mainframe and Midrange Users   *4-23*
Version 2.3

Appendix A: Command Lines for Different Methods of Sending Data

1) Sending multiple batches of data in one file requires that you have multiple sets of O*N05 and O*N95 transmission headers and trailers around each batch within the file. You must use the O*N05TGxxxxx in the header and O*N95TGxxxxx in the trailer to specify the destination point for each batch of data. See Chapter 4, *Header and Trailer Record Layouts*, for specifics.

2) Since FTPPASSWD is stored in the TDClient.INI file in encrypted format, it is not necessary to hardcode your password in all of your scripts and/or JCL. See chapter 3 for recommendation to change your password.

Note: **These are examples only and may require customization at your site.**

Example 1: Sample of multiple Transfer statements to send multiple batches in one file. You must specify a corresponding input file for each Transfer statement.

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name1 SENDUSERID=TGxxxxx SEND=DD:FILENAM1
  OTHER_COMP_PARMS='SECFILE=DD:SECFILEX')
TRANSFER=(NAME=name2 SENDUSERID=TGxxxxx SEND=DD:FILENAM2
  OTHER_COMP_PARMS='SECFILE=DD:SECFILEX')
```

See Example 2 on the next page.

Appendix A: Command Lines for Different Methods of Sending Data (Continued)

Example 2: Sample JCL to compress a file prior to the TDClient step. See example 3 to send the compressed file with compression turned off in TDClient.

```
//STEP0010   EXEC PGM=COMPRESS,REGION=4M,TIME=1440,
//           PARM='FILTER ASCII CRLF SECFILE=DD:SECFILX'
//STEPLIB    DD DSN=SAIG.EASYACC.LOADLIB,DISP=SHR
//*
//SYSOUT    DD SYSOUT=*
//SYSUDUMP  DD SYSOUT=*
//COMPLOG   DD SYSOUT=*
//SYSPRINT DD  SYSOUT=*
//DATAIN     DD DSN=SAIG.UNCOMP.EAPS03IN,DISP=SHR
//DATAOT     DD  DSN=SAIG.COMP.EAPS03IN,
//           DISP=(NEW,CATLG),RETPD=30,
//           SPACE=(CYL,(60,60),RLSE),UNIT=SYSDA,
//           LRECL=8192,BLKSIZE=0,RECFM=VB
//*
//SECFILX  DD*
HEADERLITERAL(O*N05) HEADERSTART(1) RECEIVERSTART(6)
RECEIVERLENGTH(14);
TRAILERLITERAL(O*N95) TRAILERSTART(1);
LITERAL(O*N01) LITERALSTART(1) DROP(Y);
LITERAL(O*N99) LITERALSTART(1) DROP(Y);
```

Appendix A: Command Lines for Different Methods of Sending Data (Continued)

Example 3: Sample JCL to send a compressed file with compression turned off in the TDClient step. See example 2, above, to compress a file prior to the TDClient step.

```
//STEP0020  EXEC PGM=EA2KMVSC,REGION=4M,TIME=1440,
//          PARM='CMDFILE=DD:CMDSEND'
//STEPLIB   DD DSN=SAIG.EASYACC.LOADLIB,DISP=SHR
//*
//EASYACC   DD DSN=SAIG.TDCLIENT.INI,DISP=SHR
//*
//EXFER     DD DSN=SAIG.EASYACC.EXFER.INI,DISP=SHR
//*
//CMDSEND   DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=comp SENDUSERID=TGxxxxx SEND=DD:SENDFILE COMPRESS=N)
//*
//SENDFILE   DD DSN=SAIG.D110501.FILTER,DISP=SHR
//*
//WORK04    DD DISP=NEW,UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS  DD DSN=SAIG.EASTATUS,
//             DISP=(NEW,DELETE),UNIT=SYSDA,SPACE=(CYL,(5,5)),
//             LRECL=8192,BLKSIZE=0,RECFM=VB,RETPD=60
//OUTMSG    DD SYSOUT=*
//SYSPRINT  DD SYSOUT=*
//EAFTPLOG  DD SYSOUT=*
//CPFTPLOG DD SYSOUT=*
```

Appendix A: Command Lines for Different Methods of Sending Data (Continued)

Example 4: Sample JCL to pre-define files required by TDClient prior to sending.

```
//*****************************************************************************
//*       Run IEBGENER to create your SYSUT1 file                            *
//*****************************************************************************
//SYSUT1     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.SYSUT1.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*       Run IEBGENER to create your SYSUT2 file                            *
//*****************************************************************************
//SYSUT2     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.SYSUT2.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*       Run IEBGENER to create your WORK01 file                            *
//*****************************************************************************
//WORK01     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.WORK01.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*       Run IEBGENER to create your WORK02 file                            *
//*****************************************************************************
//WORK02     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.WORK02.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
```

Appendix A: Command Lines for Different Methods of Sending Data (Continued)

Example 4: Sample JCL to pre-define files required by TDClient prior to sending (Continued)

```
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*      Run IEBGENER to create your WORK03 file                            *
//*****************************************************************************
//WORK03     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.WORK03.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*      Run IEBGENER to create your WORK04 file                            *
//*****************************************************************************
//WORK04     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
```

Appendix A: Command Lines for Different Methods of Sending Data (Continued)

Example 4: Sample JCL to pre-define files required by TDClient prior to sending (Continued)

```
//SYSUT2     DD     DSN=your.dataset.WORK04.file, //
      DISP=(NEW,CATLG),UNIT=SYSDA,
//                   DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                   SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*       Run IEBGENER to create your EASTATUS file                          *
//*****************************************************************************
//EASTATUS   EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.EASTATUS.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(CYL,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*       Run EA2KMVSC To Send                                               *
//*****************************************************************************
//STEP0020   EXEC   PGM=EA2KMVSC,REGION=4M,PARM='CMDFILE=DD:CMDSEND'
//*
//STEPLIB    DD     DSN=your.dataset.prefix.EALOAD,DISP=SHR
//*
//EASYACC    DD     DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//*
//EXFER      DD     DSN=your.dataset.prefix.TDCLIENT.EXFER.INI,DISP=SHR
//*
//CMDSEND    DD     *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=xxxxxxxx SEND=DD:SENDFLE
SENDUSERID=TGxxxxx OTHER_COMP_PARMS='SECFILE=DD:SECFILEX')
//*
//SENDFLE    DD     DSN=your.dataset.SEND.file,DISP=SHR
//SYSUT1     DD     DSN=your.dataset.SYSUT1.file,
//                  DISP=(OLD,DELETE,DELETE)            ←=== CAN KEEP
//SYSUT2     DD     DSN=your.dataset.SYSUT2.file,
//                  DISP=(OLD,DELETE,DELETE)            ←=== CAN KEEP
//WORK01     DD     DSN=your.dataset.WORK01.file,
//                  DISP=(OLD,DELETE,DELETE)            ←=== CAN KEEP
//WORK02     DD     DSN=your.dataset.WORK02.file,
//                  DISP=(OLD,DELETE,DELETE)            ←=== CAN KEEP
//WORK03     DD     DSN=your.dataset.WORK03.file,
//                  DISP=(OLD,DELETE,DELETE)            ←=== CAN KEEP
```

Appendix A: Command Lines for Different Methods of Sending Data (Continued)

Example 4: Sample JCL to pre-define files required by TDClient prior to sending (Continued)

```
//WORK04    DD        DSN=your.dataset.WORK04.file,
//                    DISP=(OLD,DELETE,DELETE)         ⬅=== CAN KEEP
//EASTATUS  DD        DSN=your.dataset.EASTATUS.file,
//                    DISP=(OLD,DELETE,DELETE)         ⬅=== CAN KEEP
//SECFILEX  DD *
SENDER(TGxxxxx);
HEADERLITERAL(O*N05) HEADERSTART(1) RECEIVERSTART(6) RECEIVERLENGTH(14)
CLASSSTART(25) CLASSLENGTH(8);
TRAILERLITERAL(O*N95) TRAILERSTART(1);
LITERAL(O*N01) LITERALSTART(1) DROP(Y);
LITERAL(O*N99) LITERALSTART(1) DROP(Y);
//*
//COMPLOG   DD SYSOUT=*
//OUTMSG    DD SYSOUT=*
//SYSPRINT  DD SYSOUT=*
//EAFTPLOG  DD SYSOUT=*
//EALOG     DD SYSOUT=*
//EXFERLOG  DD SYSOUT=*
//CPFTPLOG  DD SYSOUT=*
//*
```

Appendix B: Command Lines for Different Methods of Receiving Data

Since FTPPASSWD is stored in the TDClient.INI file in encrypted format, when you change your password, it is not necessary to hardcode your password in all of your scripts and/or JCL. See Chapter 3 for recommendation to change your password.

Note: These are examples only and may require customization at your site.

Example 1: Receive all data by specific sender ID: RECEIVEUSERID= the sender of the data being requested.

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name RECEIVE=DD:name RECEIVEUSERID=TGxxxx)
```

Example 2: Receive all data by specific message class: RECEIVECLASS= the message class of the data being requested.

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name RECEIVE=DD:name RECEIVECLASS=messclass)
```

Example 3: Receive all data in mailbox: Notice that RECEIVEUSERID= and RECEIVECLASS= have been removed .

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name RECEIVE=DD:name)
```

Example 4: Receive data by unique file name: RECEIVE_SERVER_FILE= the Unique Filename on TDCM or the Available status record within your Query List. (See Figure 4-16)

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name RECEIVE=DD:name
    RECEIVE_SERVER_FILE=xxxxxxxxxxxxxxxxxxxx)
```

Example 5: Delete data by unique file name: DELETE_SERVER_FILE= the Unique Filename on TDCM or the Available status record within your Query List. (See Figure 4-16)

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name RECEIVE=DD:name
    DELETE_SERVER_FILE=xxxxxxxxxxxxxxxxxxxx)
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 6: Receive multiple files by specific message class using multiple TRANSFER statements. Specify RECEIVECLASS= for the message class of the data being requested. You must specify a corresponding output file for each Transfer statement. We recommend that you specify the exact record length if receiving fixed block data.

```
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=nam1 RECEIVE=DD:RECVFL1
RECEIVECLASS=SARA02OP) TRANSFER=(NAME=nam2
RECEIVE=DD:RECVFL2 RECEIVECLASS=CORR02OP)
```

Note: Example 7 is on the next page.

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 7: Concatenate the O*N01 File Header and O*N99 File Trailer records into your Receive data file using IEBGENER. Sample for users whose programs require the O*N01 & O*N99 records.

```
//STEP01     EXEC PGM=IEBGENER
//SYSPRINT   DD SYSOUT=*
//SYSUT1     DD DSN=your.dataset.prefix.IEBGEN01,DISP=SHR
//SYSUT2     DD DSN=your.dataset.prefix.IEBGALL.RECV1,
//              DISP=(MOD,CATLG),UNIT=SYSDA,
//              DCB=(LRECL=nnnn,BLKSIZE=nnnnn,RECFM=FB),
//              SPACE=(CYL,(n,n))
//SYSIN      DD DUMMY
//*
//STEP02 EXEC PGM=EA2KMVSC,REGION=4M,PARM='CMDFILE=DD:CMDRECV'
//*
//STEPLIB    DD DSN=your.dataset.prefix.EALOAD,DISP=SHR
//*
//EASYACC    DD DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//*
//EXFER      DD DSN=your.dataset.prefix.TDCLIENT.EXFER.INI,DISP=SHR
//*
//CMDRECV DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=name RECEIVE=DD:receive RECEIVEUSERID=TGxxxxx)
//*
//receive    DD DSN=your.dataset.prefix.IEBGALL.RECV1,
//              DISP=(MOD,CATLG),UNIT=SYSDA,
//              DCB=(LRECL=nnnn,BLKSIZE=nnnnn,RECFM=FB),
//              SPACE=(CYL,(nn,nn))
//*
//SYSUT1     DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK01     DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK02     DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK03     DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK04     DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS   DD DSN=your.dataset.prefix.EASTATUS,
//              DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(CYL,(5,5)),
//              LRECL=8192,BLKSIZE=0,RECFM=VB
//*
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 7 (Continued)

```
//DCMPLOG   DD SYSOUT=*
//OUTMSG    DD SYSOUT=*
//SYSPRINT  DD SYSOUT=*
//EAFTPLOG  DD SYSOUT=*
//EALOG     DD SYSOUT=*
//EXFERLOG  DD SYSOUT=*
//STEP03 EXEC PGM=IEBGENER,COND=(00,NE,STEP02)
//SYSPRINT  DD SYSOUT=*
//SYSUT1    DD DSN=your.dataset.prefix.IEBGALL.RECV1,DISP=(OLD,PASS)
//          DD DSN=your.dataset.prefix.IEBGEN99,DISP=SHR
//SYSUT2    DD DSN=your.dataset.prefix.IEBGNOC.RECV6,
//             DISP=(,CATLG),UNIT=SYSDA,
//             DCB=(your.dataset.prefix.IEBGALL.RECV1),
//             SPACE=(CYL,(nn,nn))
//SYSIN     DD DUMMY
//*
//STEP04 EXEC PGM=IEFBR14,COND=(00,NE,STEP03)
//FILE1     DD DSN=your.dataset.prefix.IEBGALL.RECV1,
//             DISP=(MOD,DELETE),
//             SPACE=(CYL,(nn,nn)
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 8: Sample JCL to receive a file with decompression turned off. See example 9 to decompress file later.
Note: these are examples only and may require customization at your site.

```
//STEP0020 EXEC PGM=EA2KMVSC,REGION=4M,PARM='CMDFILE=DD:CMDRECV'
//*
//STEPLIB DD DSN=SAIG.EASYACC.LOADLIB,DISP=SHR
//EASYACC DD DSN=SAIG.D081501.APPSYS.TDCLIENT.INI,DISP=SHR
//EXFER DD DSN=SAIG.TDCLIENT.EXFER.INI,DISP=SHR
//*************************************************************
//* THESE COMMANDS WILL RECEIVE MULTIPLE FILES AND PUT INTO THE
//* RECEIVE FILE. BUT, WHEN YOU DECOMPRESS THE FILE YOU MUST
//* HAVE THE EXACT DECOMPRESS LRECL OR THE O*N05 WILL NOT BEGIN IN
//* POSITION 1. IT WILL INSTEAD BE AT THE END OF O*N95.
//*************************************************************
//CMDRECV DD *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=COPY RECEIVE=DD:RECV OTHER_DECOMP_PARMS='COPYONLY')
//*
//RECV DD DSN=SAIG.COMP.CORR03OP,
//      DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(TRK,(5,5)),
//      LRECL=8192,BLKSIZE=0,RECFM=VB
//*
//SYSUT1 DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//        LRECL=8192,BLKSIZE=0,RECFM=VB
//SYSUT2 DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//        LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK01 DD DSN=SAIG.WORK01.D112701.ALL,
//        DISP=(NEW,CATLG),UNIT=SYSDA,SPACE=(TRK,(5,5)),
//        LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK02 DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//        LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK03 DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//        LRECL=8192,BLKSIZE=0,RECFM=VB
//WORK04 DD DISP=NEW,UNIT=SYSDA,SPACE=(TRK,(5,5)),
//        LRECL=8192,BLKSIZE=0,RECFM=VB
//EASTATUS DD SYSOUT=*
//OUTMSG DD SYSOUT=*
//DCMPLOG DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//EAFTPLOG DD SYSOUT=*
//
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 9: Sample JCL to decompress a file that has already been received by TDClient with decompression turned off. When you decompress the file you must have the exact decompressed record length of the file or the O*N05 record will not begin in position one. It will instead be at the end of the O*N95 record.

Note: These are examples only and may require customization at your site.

```
//STEP0010  EXEC PGM=DECOMP,REGION=4M,TIME=1440,
//          PARM='APPEND UNCOMP'
//STEPLIB   DD DSN=SAIG.EASYACC.LOADLIB,DISP=SHR
//*
//SYSOUT   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//DCMPLOG  DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//DATAIN      DD DSN=SAIG.COMP.CORR03OP,DISP=SHR
//DATAOT      DD DSN=SAIG.UNCOMP.CORR03OP.DCMP3,
//          DISP=(NEW,CATLG),RETPD=30,
//          SPACE=(CYL,(60,60)),UNIT=SYSDA,
//          LRECL=2850,BLKSIZE=0,RECFM=FB
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 10: Sample JCL to pre-define files required by TDClient prior to receiving.

```
//*****************************************************************************
//*        Run IEBGENER to create your RECVFLE file                          *
//*****************************************************************************
//RECVFLE    EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.receive.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=nnnn,BLKSIZE=nnnnn,RECFM=FB),
//                  SPACE=(CYL,(nn,nn))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*        Run IEBGENER to create your SYSUT1 file                           *
//*****************************************************************************
//SYSUT1     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.SYSUT1.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*        Run IEBGENER to create your SYSUT2 file                           *
//*****************************************************************************
//SYSUT2     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.SYSUT2.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
//SYSIN      DD     DUMMY
//*****************************************************************************
//*        Run IEBGENER to create your WORK01 file                           *
//*****************************************************************************
//WORK01     EXEC   PGM=IEBGENER
//SYSUT1     DD     DUMMY
//SYSUT2     DD     DSN=your.dataset.WORK01.file,
//                  DISP=(NEW,CATLG),UNIT=SYSDA,
//                  DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                  SPACE=(TRK,(5,5))
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 10 (Continued)

```
//SYSIN        DD     DUMMY
//****************************************************************************
//*       Run IEBGENER to create your WORK02 file                           *
//****************************************************************************
//WORK02       EXEC   PGM=IEBGENER
//SYSUT1       DD     DUMMY
//SYSUT2       DD     DSN=your.dataset.WORK02.file,
//                    DISP=(NEW,CATLG),UNIT=SYSDA,
//                    DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                    SPACE=(TRK,(5,5))
//SYSIN        DD     DUMMY
//****************************************************************************
//*       Run IEBGENER to create your WORK03 file                           *
//****************************************************************************
//WORK03       EXEC   PGM=IEBGENER
//SYSUT1       DD     DUMMY
//SYSUT2       DD     DSN=your.dataset.WORK03.file,
//                    DISP=(NEW,CATLG),UNIT=SYSDA,
//                    DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB), //
       SPACE=(TRK,(5,5))
//SYSIN        DD     DUMMY
//****************************************************************************
//*       Run IEBGENER to create your WORK04 file                           *
//****************************************************************************
//WORK04       EXEC   PGM=IEBGENER
//SYSUT1       DD     DUMMY
//SYSUT2       DD     DSN=your.dataset.WORK04.file,
//                    DISP=(NEW,CATLG),UNIT=SYSDA,
//                    DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                    SPACE=(TRK,(5,5))
//SYSIN        DD     DUMMY
//****************************************************************************
//*       Run IEBGENER to create your EASTATUS file                         *
//****************************************************************************
//EASTATUS     EXEC   PGM=IEBGENER
//SYSUT1       DD     DUMMY
//SYSUT2       DD     DSN=your.dataset.EASTATUS.file,
//                    DISP=(NEW,CATLG),UNIT=SYSDA,
//                    DCB=(LRECL=8192,BLKSIZE=0,RECFM=VB),
//                    SPACE=(CYL,(5,5))
//SYSIN
```

Appendix B: Command Lines for Different Methods of Receiving Data (Continued)

Example 10 (Continued)

```
DD      DUMMY
//****************************************************************************
//*        Run EA2KMVSC To Receive                                          *
//****************************************************************************
//STEP0020    EXEC    PGM=EA2KMVSC,REGION=4M,PARM='CMDFILE=DD:CMDRECV'
//*
//STEPLIB    DD      DSN=your.dataset.prefix.EALOAD,DISP=SHR
//*
//EASYACC    DD      DSN=your.dataset.prefix.TDCLIENT.INI,DISP=SHR
//*
//EXFER      DD      DSN=your.dataset.prefix.TDCLIENT.EXFER.INI,DISP=SHR
//*
//CMDRECV    DD      *
NETWORK=SAIGPORTAL FTPUSERID=TGxxxxx RESET
TRANSFER=(NAME=xxxxxxxx RECEIVE=DD:RECVFLE
RECEIVEUSERID=TGxxxxx RECEIVECLASS=messageclass)
//*
//RECVFLE    DD      DSN=your.dataset.receive.file,DISP=SHR
//*
//SYSUT1    DD      DSN=your.dataset.SYSUT1.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//SYSUT2    DD      DSN=your.dataset.SYSUT2.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//WORK01    DD      DSN=your.dataset.WORK01.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//WORK02    DD      DSN=your.dataset.WORK02.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//WORK03    DD      DSN=your.dataset.WORK03.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//WORK04    DD      DSN=your.dataset.WORK04.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//EASTATUS  DD      DSN=your.dataset.EASTATUS.file,
//                  DISP=(OLD,DELETE,DELETE)              <=== CAN KEEP
//DCMPLOG   DD SYSOUT=*
//OUTMSG    DD SYSOUT=*
//SYSPRINT  DD SYSOUT=*
//EAFTPLOG  DD SYSOUT=*
//EALOG     DD SYSOUT=*
//EXFERLOG  DD SYSOUT=*
//*
```

May 2005   *Host Communication Guide*   *Appendix B*
for Mainframe and Midrange Users   *B-9*
Version 2.3

Appendix C: UNIX Scripts for Different Methods of Receiving Data

Note: these are examples only and may require customization at your site.

Example 1: Receive data by a specific sender ID, RECEIVEUSERID= the sender of the data being requested. Depending on options in the TDClient.INI file it will either all be concatenated into one file, or each item will go into its separate file named receive.txt.xxx , where xxx can be any number from 001 to 999.

```
ea2khp10c network=saigportal ftpuserid=TGxxxxx reset              \
"transfer=(name=xxxxx receive=./path/to/the/file/to/receive.txt   \
   receiveuserid=TGxxxxx)"
```

Example 2: Receive all data by a specific message class, RECEIVECLASS= the message class of the data being requested. Depending on options in the TDClient.INI file it will either all be concatenated into one file, or each item will go into its separate file named receive.txt.xxx, where xxx can be any number from 001 to 999.

```
ea2khp10c network=saigportal ftpuserid=TGxxxxx reset              \
"transfer=(name=xxxxxxxx receive=./path/to/the/file/to/receive.txt  \
   receiveclass=xxxxxxxx)"
```

Example 3: Receive data by unique file name: RECEIVE_SERVER_FILE= the Unique Filename on TDCM or the Available status record within your Query List.

```
ea2khp10c network=saigportal ftpuserid=TGxxxxx reset              \
"transfer=(name=xxxxxx receive=./path/to/the/file/to/receive.txt    \
\receive_server_file= xxxxxxxxxxxxxxxxxxx)"
```

Example 4: Receive all data in mailbox: Notice that RECEIVEUSERID= and RECEIVECLASS= have been removed.

```
ea2khp10c network=saigportal ftpuserid=TGxxxxx reset              \
"transfer=(name=xxxxxxxx                                          \
   receive=./path/to/the/file/to/receive.txt)"
```

Appendix D: Trouble Shooting

Errors Received When Sending and Receiving Data

Listed below are common errors received when sending and receiving data. We are providing you with common resolutions to these errors. Users may view the SYSOUT file for details of return codes and ftp errors received. Midrange users may view the Temp directory for files with return codes.

Error	Resolution
RC=03	Can indicate an invalid command line argument. This error is often received because of missing parameters or incorrect syntax in the command line. A missing "SENDUSERID" can generate this error. For instance: NETWORK=SAIGPORTAL FTPUSERID=TG50000 FTPPASSWD=PASSWORD RESET **TRANSFER=(NAME=anything SEND=DD:SENDFILE** SENDUSERID=TG50000 **OTHER_COMP_PARMS='SECFILE=DD:SECFILEX')**
RC=05	Can indicate a missing network header (O*N05) or trailer (O*N95) in the data file; or the SECFILE may have a syntax error. May indicate and invalid password.
RC=32 **Error writing output file DD:WORK01** **WARNING: Compression of file failed** **Error: Compress of file failed** **Compress failed.** **Error Code: CMP0033**	Resolution is to increase space for WORK01 or receive data by tape.
RC=103	Decompression error; check the SECFILE for syntax errors.

421 Peer Closed Connection	If you receive the error "421 peer closed connection" when receiving files then your internet connection has dropped. Connect again and you should receive as normal.
	
	To prevent manually restarting your job in the future, make sure your TDCLIENT.INI file has the following parameters specified:
	    AUTO_RETRY=Y
	    MAX_RETRY=5
	    RETRY_DELAY=30

Errors Received When Sending and Receiving Data (Continued)

Error	Resolution
332 or 531 Change password required	Your SAIG password has expired. Your must change your mailbox password every 90 days.
532 through 537 or 540 Login incorrect	You are using an incorrect SAIG password. (See the EDconnect Error Code List for a complete description of each error.)
550 Internal Server Problem Login for UserID failed	A lower case "tg" was used for the user id. Use "TG" in upper case for the user id.
Autoextent function not working properly	When setting options in the TDClient.INI file to make separate files for every file received(AUTOEXT=Y APPEND=N), the files aren't being created correctly. The 05 header is being placed in one file, and the data and 95 trailer is getting placed in a different file. Solution is to set AUTOEXT=N APPEND=Y to associated file, and receive multiple files. Designate file name to append all files plus N05.
B37 U4083; SOC4; CEE3250C The system or user abend SB37 R=00000004 was issued. From entry point DCCloseOutputFile at compile unit offset.	We have experienced multiple reasons for this error. Solutions may include writing to Tape, removing the RLSE command (with VAN reference), or pre-defining datasets prior to EA step. You may try one of the following solutions: 1) If using the RLSE parameter in your in DD definition, i.e., SPACE=(CYL,(nn,nn),RLSE), you may receive SB37 errors when receiving multiple batches. TDClient opens the Receive file for the first batch to be received and then closes the file releasing unused space. When the next batch is received EA opens the Receive file again with a disposition of MOD, which appends the new batch to the data already in the file. Since the remaining space allocated was released after the first batch was received this may cause a space problem. A similar situation may occur with the additional files required by EA for a Send or a Receive, SYSUT1, SYSUT2, WORK01, WORK02, WORK03, WORK04 and EASTATUS. We recommend that you pre-define these datasets prior to the TDClient step. You may then use a MOD disposition to append multiple batches to the file. See Appendix B, Example 10 for a sample using IEBGENER to pre-define datasets. 2) There is a known issue with EA resulting in an abend code U4083 or SOC4. This is caused by a storage overlay. Click Commerce has repaired the problem in version 1.5 of EA. A temporary solution is to pre-define the files used by TDClient. See solution number 1 above.
CEE3512S-message (IBM LE error)	Caused by not having valid USS home directories setup for the user IDs. According to IBM, the system was searching the USS files when trying to load COMMPRSS, but was failing when searching the user's home directory. In later releases of OS/390 the search continues to MVS locations such as steplib, lpa, and linklist, but 2.6 causes an abend.
EDC81281 Connection Refused	In MVS 2.8 LE 1.9+, an LE(Language Environment) error. IT staff need to look at the LE setup.

Errors Received When Sending and Receiving Data (Continued)

Error	Resolution
MVS v2.6 Only **Error Code: DCM0061** **WARNING: Decompression of file failed** **Error: Decompression of file failed** **Decomp failed. Error Code: DCM0061** **WARNING: Decompression of file failed** **Made backup copy of compressed file which failed to decompress.** **Backup FileName: DD:WORK01.001**	Add DSN=&&WORK01(etc) to the WORK01 DD, WORKxx, and SYSUTx DDs in the RECV job.
RC=U4038	This is usually an OMVS security error. Resubmitting the job is successful. Click Commerce recommends following the installation and customization instructions in the OS/390 VnRn.n UNIX System Services Planning manual, which can be found in the IBM documentation CDs (usually disk 1) in the OS/390 VnRn.n UNIX System Services Base Element Bookshelf. Be sure to use the manual that corresponds to your operating system release. If your site is non-UNIX, and you don't wish to set up OMVS for your users, B-trade recommends setting up a default OMVS segment for all users, so batch programs that make use of OMVS Services and Functions can be run.

Errors Received When Sending and Receiving Data (Continued)

Error	Resolution
UNIX only **Id.so.1: ea2ksunc: fatal: libcpsql.so: open failed: No such file or directory Chngpasswd: 18540 Killed**	The solution is to copy the shared objects to the shared library. Then, issue a chmod on the files from the lib directory(chmod –R 755 libcpsql.so). Note: the lib directory can be located from the root (/lib).libcpsql.so, if this object is not located in the shared library then please contact customer service.
UNIX only **Decomp failed, Error Code: DCM0073**	Your directory does not exist. 1. Ensure that the AUTOEXT parameter in the TDCLIENT.INI file is set to N.(AUTOEXT=N) and the APPEND is set to Y (APPEND=Y). 2. In your Transfer statement, make sure the RECEIVE= parm has a directory name, not a filename specified (receive=./incoming/sarafiles/).
WARNING: Action failed Unable to RESET TDClient Restart file Failed to open EA Restart file [./eastatus.txt] in write mode permission denied	Solution is to create the eastatus.txt in the TDCLIENT.INI directory, with read & write permissions.

Appendix E: TDClient.ini Defaults

```
[SECURITY]
NETWORK=SAIGPORTAL
EDINAME=SAIG
EMAILADDRESS=CPSSAIG@ED.GOV
RTMGENERATE=N
AUTOUPDATERUNTIME=N
MODULUS=0
APPROVALCODE=D24494E4C5F767101C8A2D08115F887FE87373E0C0AAA4
8923154106CA071289
EXPDATE=0703EFE91E10CFE20955E386505A2FC2D5A9E6E8CA28DF084DC4
C356A51CCBB6
VALID=FULL VERSION

[NETWORKS]
1=SAIGPORTAL

[MAINT]
NETWORK=SAIGPORTAL

[SAIGPORTAL]
HOSTIPNAME=                          (contact CPSSAIG for IP address)
NETWORKSTYLE=EAFTP
PASSIVE=N
CASE=
DHONLY=Y
SSL=Y
AUTO_DIAL=N
AUTO_DISCONNECT=N
SECURITYMENU=Y
SUNIQUE=0
CONTROL_PORT=26581
MAX_AUTO_DIAL_DELAY=180
USERID=
PASSWORD=
NAME=
AUTO_DELETE=N
COMMAND_OVER_DATA=Y
DATA_OVER_COMMAND=Y
SITEDELAY=0
ADDRESS_BOOK=N
PRIMARY_DIALER_TYPE=N
```

Appendix E: TDClient.ini Defaults (Continued)

```
PRIMARY_DIALER_APP=
PRIMARY_DIAL_ENTRY=
SECONDARY_DIALER_TYPE=N
SECONDARY_DIALER_APP=
SECONDARY_DIAL_ENTRY=
MAILBOX_USERID=
MAILBOX_PASSWORD=

[SAIGPORTAL-DEFAULT_SENDPARMS]
COMPRESS=Y
FILTER=Y
ASCII=Y
CRLF=Y

[SAIGPORTAL-DEFAULT_RECEIVEPARMS]
APPEND=Y
AUTOEXT=N
UNCOMP=Y
ASCII=Y

[IDENTIFY]
NETWORK=SAIGPORTAL
MULTITHREADED=N
DISABLE_DIALER=N
MULTIFILE=Y
AUTO_RETRY=Y
MAX_RETRY=5
RETRY_DELAY=300
AUDIT_START_DATE=
AUDIT_END_DATE=
STARTTIME=
STARTDATE=
LOG_MEM=N
LOG_INI=N
LOG_XFER=N
LOG_FTP=4
LOG_EASYACC=N
LOG_THREAD=N

[EAPATH]
BASEPATH=
```